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No. 6.

NOTES OF CANADIAN LEPIDOPTERA.

(BY THE EDITOR.)

(Continued from Page 18.)

32. *CALLIMORPHA LE CONTEI*, Boisd.—In our List as a *Hypercompa*. Grote and Rob., in their valuable "List of Lepidoptera," p. viii, enumerate no less than seven varieties or synonyms of this species, of which *C. Contigua*, Walk., was included in our list. This is certainly a well-marked and constant form, and can hardly, we think, be merged into *Lecontei* until both have been reared from the same larvae. Mr. Saunders (*vide* C. E., No. 3, p. 20) has been the first to rear and describe the larva of any species of this genus.

33. *CALLIMORPHA INTERRUPTO-MARGINATA*, Beauv.—Formerly known as a *Hypercompa*. What a pity that we cannot substitute Harris' short and appropriate name *Anchora* for the species!

34. *PLATARCTIA PARTHENOS*, Harris.—This new genus, which includes five species, has been separated by Dr. Packard from *Arctia*; its members are distinguished by having no gay-coloured bands across the fore-wings, but a yellowish band across the hind-wings beyond the middle. *Parthenos* is an extremely rare insect in Canada; we have seen but one specimen, captured by Mr. J. M. Jones, in Nova Scotia. Should any collector be so fortunate as to make a haul of this species at any time, we trust he will remember that both we and many of our correspondents are anxious to obtain specimens.

35. *PLATARCTIA BOREALIS*, Mosch.—A full description of this insect is given by Dr. Packard (Pro. E. S. Phil. iii. 111). He states, on the authority of Mr. Edwards, that it has been taken at Quebec. Another species, *P. Scudderi*, Pack., we can hardly include as Canadian yet; it was taken by Mr. Scudder, on the Saskatchewan river.

36. *EUPREPIA AMERICANA*, Harris.—In our List as an *Arctia*.

37. *PYRRHARCTIA ISABELLA*, Smith.—A new genus, by Dr. Packard, for this old friend (well known as a *Spilosoma*), and a California species.

38. *LEUCARCTIA ACRÆA*, Drury.—Also separated from *Spilosoma*, by Dr. Packard.

39. *HYPHANTRIA TEXTOR*, Harris.—A common insect in many parts of Ontario, but not included in our Lists. Its larva is likely to become only too familiar with apple growers (*vide* Canada Farmer, 1867, p. 269.)

40. *ORGYIA NOVA*, Fitch.—We took this species at Cobourg, in Sept. 1865, flying about a lawn in the sunshine.

41. *ICHTHYURA INVERSA*, Packard.—Taken at London, Ontario, by Mr. Reed, at Cobourg, Ontario, by ourselves, and in Nova Scotia, by Mr. Jones.

42. *ICHTHYURA ALBO-SIGMA*, Fitch.—In our List as a *Clostera*. Taken in Toronto and other parts of Canada, and also in Nova Scotia.

43. *ICHTHYURA INCLUSA*, Hubn.—In our list as *Clostera Americana*, Harris.

44. *DATANA CONTRACTA*, Walk.—Taken by Mr. Reed, at London, and by ourselves at Credit, June 22, 1868, attracted by light.

45. *DATANA ANGUSII*, Grote & Rob.—Taken by Mr. Pettit, at Grimsby, Ontario. We have to thank Mr. James Angus, of West Farms, N. Y., from whom the species derives its name, for a fine pair of specimens, together with a number of other insects.

46. *CELODASYS BIGUTTATA*, Pack.—Taken at Orillia, Ontario, by Mr. Bush; described by Mr. Walker (C. B. M. xxxii. 417), and in our List, as *Heterocampa ducens* and *H. compta*.

47. *HETEROCAMPA MANTEO*, Walk.—In our List as *H. subalbicans*, Grote; the former name has the priority.

48. *IANASSA LIGNICOLOR*, Walk.—Described by Walker afterwards (C. B. M., xxxii, 427) as *Edema ? transversata*; the name *Edema plagiata*, Walk., is also to be dropped from our List. According to Grote & Rob. (Trans. Am. Ent. Soc. ii. 86) it belongs to *Parorgyia* Pack.

49. *DYROPTERIS ROSEA*, Grote.—Taken in Nova Scotia, by Mr. J. M. Jones, President of the Institute of Natural Science, at Halifax.

50. *DYROPTERIS IRRORATA*, Packard.—Also taken in Nova Scotia, by Mr. Jones.

51. *TELEA POLYPHEMUS*, Hubn.—In our List as a *Saturnia*.

52. *ACTIAS LUNA*, Leach.—Ditto.

53. *CALLOSAMIA PROMETHEA*, Drury.—Ditto. A new genus by Dr. Packard.

54. *PLATYSAMIA CECROPIA*, Linn.—Ditto. A new genus by Mr. Grote.

55. *PLATYSAMIA COLUMBIA*, Smith.—This species, which is described as closely allied to *P. cecropia*, but differing from it in all its stages, is reported to have been taken in the neighbourhood of Quebec; we should like to hear from our friends in that quarter about it. Its food-plant, the *Rhodora Canadensis*, grows plentifully back of Toronto, so we hope to hear of its capture there ere long.

56. *HYPERCHIRIA VARIA*, Walk.—We have been so long accustomed to call this insect *Saturnia io*, that we find it difficult to recognize it under its proper name. *Io* is the name of a South American insect of a different genus.

57. *ANISOTA STIGMA*, Smith.—In our List as a *Dryocampa*.

58. *ANISOTA SENATORIA*, Smith.—Ditto.

59. *ANISOTA PELLUCIDA*, Smith.—Ditto.

60. *TOLYPE VELLEDA*, Hubn.—In our List as *Gastropacha*.

61. *TOLYPE LARICIS*, Fitch.—Ditto.

62. *CLISTOCAMPA DISTRIA*, Hubn.—In our List as *C. sylvatica*, Harris; the former name has the priority.

63. *XYLEUTES ROBINIÆ*, Harris.—In our List as a *Cossus*.

LIST OF DIURNAL LEPIDOPTERA.

OBSERVED IN THE NEIGHBOURHOOD OF OTTAWA, DURING THE SEASON OF 1868.

BY B. BILLINGS.

1. *Papilio turnus*, L.—Not common, a few specimens seen late in June and early in July.

3. *Papilio asterias*, Dr.—Rare. But two specimens seen, one in July, and the other in August.

3. *Pieris oleracea*, Harr.—Plentiful. May, July, August and September.

4. *Colias philodice*, Godt.—Abundant throughout the season, except in July. The variety of white females was occasionally met with in August.

5. *Danaus archippus*, Harr.—Very common from the last of July to 1st October. A few worn individuals seen about the 1st July. Does this species immigrate? Otherwise what becomes of it for nine months of the year?

6. *Limenitis dissippus*, Godt.—June, rare. July to October very common. From the larva, I obtained a butterfly which remained but five days in the chrysalis state.

7. *Limenitis arthemis*, Dr.—Plentiful in woods. July and August.

8. *Argynnis cybele*, Godt.—July, August and September. Not common.

9. *Argynnis atlantis*, Edw.—Appears to be rare. But two specimens observed.

10. *Argynnis myrina*, Cram.—Very abundant in June, and plentiful in August and September.

11. *Melitæa tharos*, Cram.—Common. July, August and September.

12. *Melitæa phaeton*, Cram.—Dow's swamp, two miles from city limits. Quite plentiful early part of July.

13. *Vanessa J-album*, Bdl. & Lec.—Rare. But one specimen seen, in August.

14. *Vanessa Milberti*, Gdt.—Very common from May to October, excepting during the month of June. About the 20th June, I collected 60 of the larvæ, which I confined in a single cell in the breeding cage. They refused to take food, and commenced to suspend themselves from the ceiling. Within two days every individual had passed into the pupal state, in which they remained but four days, at the end of which time I found 60 butterflies—not one, it appears, had failed to come to maturity.

15. *Vanessa antiopa*, L.—Rare. A single specimen seen in June, and several in October.

16. *Grapta progne*, Harr.—Rather rare, occasionally met with in open woods throughout the season, from May to October.

17. *Grapta faunus*, Edw.—Rare. But one specimen observed, in woods late in July.

18. *Neonympha eurythris*, F.—Common in open woods in July.

19. *Hipparchia Boisduvalii*, Harr.—Moist places; quite plentiful; July.

20. *Erebia nephele*, Kirby.—Abundant in fields and thickets in July and August.

21. *Chrysophanus Americana*, D'Urban.—Plentiful in June, and from the latter part of July to October.

22. *Lycæna neglecta*, Edw.—Rare. But a single specimen seen, in June.

23. *Lycæna lucia*, Westw.—Rather rare. June and July.

24. *Thecla acadica*, Edw.—Rare, on thistle blossoms in July.

25. *Pyrameis atalanta*, L.—Rare. But four specimens seen in August.

26. *Pyrameis cardui*, L.—From 1st of August to October; very common.

27. *Nisoniades briso*, Bdl. & Lec.—Plentiful in thickets, in June.

28. *Eudamus bathyllus*, Bdl. & Lec.—Plentiful in June and July.

29. *Hesperia metacomet*, Harr.—Appears to be rare. A few specimens observed in meadows in July.

30. *Hesperia Hobomok*, Harr.—Abundant in June, not afterwards seen. There does not appear to have been a second brood.

31. *Hesperia ahaton*, Harr.—Very abundant the latter part of June and early in July. The only indication of a second brood was a single individual seen by me on 3rd September.

32. *Hesperia wamsutta*, Harr.—Abundant in July and occasionally met with in August.

33. *Hesperia mystic*, Scudd.—June, July and August; in meadows; rare.

34. *Hesperia Leonardus*, Harr.—But a single specimen, seen in a meadow in July.

35. *Hesperia Pocahontas*, Scudd.—Rare; in thickets; June and July.

Besides the above, I have taken previous to the present season :

36. *Grapta comma*, Dbld.—Which I raised from larvæ found on the hop.
37. *Pyrameis huntera*, Sm.—Quite common in 1863.
38. *Thecla falacer*, Godt.—Taken on composite flowers in August.
39. *Nisoniades catullus*, Sm.—Taken within the government grounds at New Edinburgh.

MISCELLANEOUS NOTES.

MUSICAL LARVÆ.—Noticing Mr. Reed's communication in your issue of Dec. 15, 1868, I thought it might be interesting to note that about twenty similar larvæ were found by me last autumn, on the hickory. Unfortunately, they died before reaching the pupa state. The noise seemed to be produced by contracting the anterior segments, thus rubbing the granulations against each other. Another sphinx larva, which I cannot now identify, emitted a sound resembling that attributed by Kirby & Spence to the larva of *A. atropos*, on being disturbed. This seemed to be caused by quickly opening and shutting the mandibles.—THEODORE L. MEAD, New York.

WINTER COLLECTING.—As an inducement to others to try winter collecting, I would mention that I have taken lately, in addition to many common forms, specimens of *Plochionus timidus*, Hald., *Lymexylon sericeum*, Harris (dead), *Merinus lævis*, *Xylophilus piceus*, Lec., and others, with several species of Hemiptera, Hymenoptera, &c.

I am now making out a list of my species, and think I shall be able to add nearly 300 to our list of Canadian Coleoptera.—J. PETTIT, Grimsby, Ont.

LAST MOTH OF THE SEASON.—On the 29th of Nov., 1868, I captured under a tree a live specimen of *Xanthia ferrugineoides*, Guen.; the thermometer was then at the freezing point, and it snowed the whole of the rest of the day. I had seen several specimens of the same moth flying about on various occasions during October and November. In Sept., 1865, I took numbers of this species at Cobourg, about plum trees, on the fruit and flying, both in the day time and at night; it was accompanied by great numbers of *Anomis grandipuncta*, Guen., and several specimens of *Xylina Bethunei*, Grote & Rob. All three species appeared to have a high appreciation of our finer varieties of plums, of which we had a very large crop that year.—O. J. S. B.

DEPRAVED TASTE OF A SPHINX.—About mid-day on the 23rd of June, 1868, a very hot day, I was driving through a wood in the township of Trafalgar, when my nostrils were greeted with a horrid odour arising from the carcase of a little dog, floating in a filthy pool, the last remnant of a dried-up stream. The place was perfectly swarming with flies, and to my utter aston-

ishment I beheld, perched on the top of the carcase in the midst of the flies, a beautiful specimen of that most lovely moth, *Amphion nessus*, Cram. Having no net with me, I tried in vain to capture it, and, though repeatedly disturbed, it returned again and again to its horrid repast. I have often seen specimens of *Danaïs archippus* and other butterflies swarm about dead fish on the shores of Lake Simcoe, but I hardly expected to find so lovely a moth in such a position, in the full noon-tide heat and glare of the day; I have usually taken it hovering over the fragrant blossoms of the lilac, in the cool twilight of the evening.—C. J. S. B.

MUSICAL LARVÆ.—No. 5 of your valuable little Journal, full of interesting matter as usual, is before me. In regard to musical larvæ of Lepidoptera, I am happy to communicate a fact from my own observations on the larva of *Cressonia juglandis*, Grote (*Smerinthus juglandis* of Smith, Harris, et auct. al.) We find this species in the month of September, often into October, upon the "hickories" *Carya alba* and *porcina*. When the tree is struck or jarred, any larvæ that may be upon the leaves give utterance to a note resembling the sound *tcép* or *tceep*, produced by the inspiration of a small quantity of air between the upper teeth of the human mouth and the lower lip, as in the act of sucking. As this larva clings quite firmly to its foothold, the jar may be often repeated, each time with the same result, before the insect is dislodged. On being seized between the thumb and finger a little behind the middle, it flexes the body sharply from side to side, with a simultaneous emission of the sound alluded to. While writing the above, my valued friend, Mr. Philip S. Sprague, of this city, has recalled the fact of a similar sound being produced by the larvæ of *Smerinthus excrucatus*, Smith, and *geminatus*, Say, when irritated, in the breeding cage. Mr. S. has, in his own mind, attributed this sound to the motion of the mandibles upon each other (quasi "gnashing of teeth?"). I presume similar occurrences have been noticed by other observers, and no doubt more thorough acquaintance with many of our so-called "dumb animals" will prove that "There is no speech nor language where their voice is not heard."—F. G. SANBORN, Boston, Mass.

NEW ENTOMOLOGICAL WORKS.

A GUIDE TO THE STUDY OF INSECTS, and a Treatise on those Injurious and Beneficial to Crops. For the use of Colleges, Farm Schools, and Agriculturists. By A. S. Packard, jun., M. D., Salem, President of the Essex Institute. Parts 3 & 4, 1868. Price 50 cents each.

Two more parts of this most valuable and interesting work are now before us. Part 3 is entirely devoted to the order Hymenoptera, and contains

accounts of the habits and economy of the various species of bees, wasps, hornets, ants, &c.; it is illustrated with three excellent full-page plates, and nearly fifty accurate wood cuts. Part 4 concludes the Hymenoptera, taking up the families of Ichneumons and other parasites, gall flies, saw flies, and horn tails; the remainder of the Part is occupied with the commencement of the order Lepidoptera, and describes the general structure of its members, the mode of rearing and preserving larvæ, and the beginning of an account of the family *Papilionidæ*. In the last few pages we observed descriptions of two new species by our friend and coadjutor, Mr. W. Saunders, viz: *Papilio brevicauda*, from St. John's, Newfoundland, and *Melitæa Packardii*, taken, we believe, in this country. This part is illustrated with upwards of sixty wood-cuts. Need we again commend this invaluable work to the attention and support of our readers?

THE AMERICAN ENTOMOLOGIST. Edited by B. D. Walsh and C. V. Riley. Published monthly by R. P. Studley & Co., 104 Olive Street, St. Louis, Mo. Oct., Nov. and Dec., 1868, Jan., 1869.

Since our former notice of this excellent periodical, four more numbers have appeared, each one replete with interesting matter, and remarkably well illustrated with Mr. Riley's carefully-executed wood-cuts. We were much gratified at learning from the November number that its circulation was then "5,000 per month, and increasing at the rate of 15 to 50 daily." This is as it should be; and we hope to hear that it has attained to the number of 10,000 before the close of the volume. We may mention again that we shall be happy to supply subscribers in Canada with copies, free of both American and Canadian postage, on the receipt of one dollar; or, together with our own publication, post free for \$1.25. We shall willingly furnish specimen numbers on application.

BOOKS RECEIVED.

Proceedings of the Boston Society of Natural History. Vol. XII., Nov. 18, 25, Dec. 2, 1868. Besides much other interesting matter, we find in these *Proceedings* a description of a new species of *Thecla*, taken at Milford, N. H.; a method of preserving larvæ in carbolic acid; and descriptions of new species of North American Bees, by Mr. Cresson, including one from Canada. We are much obliged to the Society for the kind exchange, the advantage of which is almost all on our side.

The Maine Farmer. Augusta, Me. Nov. 21, 28, Dec. 5, 12, 19, 1868. An excellent agricultural and family paper.

Prospectus of *Le Naturaliste Canadien*; a projected monthly periodical, on all branches of natural history, to be published at Quebec (in French) by

M. C. Darveau, and edited by our respected correspondent, M. l'Abbe Provancher, of Portneuf. The subscription price is \$2 per annum, payable in advance. We heartily wish success to this first attempt to popularize natural history among the French speaking inhabitants of Lower Canada.

The American Naturalist. Salem, Mass. Vol. II., No. 11, Jan., 1859. We always look forward eagerly to the arrival of each number of this most interesting magazine. If any one with any taste for natural history wishes to spend a pleasant hour by the cozy fireside in winter, or enjoy the cool shade of a wide-spreading tree in summer, or indeed occupy his leisure time profitably and agreeably all the year round, we commend him to this periodical. Every number contains something about Entomology; this time there is a capital "Chapter on Flies," by Dr. Packard, illustrated with a full-page plate and several wood cuts. A new volume begins with the March number, when the editors find themselves compelled to increase the subscription price. It has always been a marvel to us how they provided such illustrations and such paper, to say nothing of the reading matter, at so low a rate. Up to March 1, the terms for Vol. III. will be \$3.50 (U. S. currency), after that date \$4. We will furnish it to our subscribers, post paid, for \$3 (Canadian currency) per annum; or the *Canadian Entomologist* and *American Naturalist* for \$3.25 per annum to new subscribers.

The Canadian Journal of Science, Literature and History, Vol. XII., No. 1, Dec., 1868. Toronto: printed for the Canadian Institute.

EXCHANGE.

BRITISH LEPIDOPTERA.—I shall be very happy to exchange British *Lepidoptera* for American *Lepidoptera*, or insects of other orders, especially the former. REV. F. O. MORRIS, Nunburnholme Rectory, Hayton, York, Eng.

** Exchanges with European Naturalists are most kindly allowed to be effected, free of charge, by the Smithsonian Institution, Washington, D. C., to which the specimens must be sent securely packed and pre-paid. The English agent of the Institution is Mr. W. Wesley, 81 Fleet Street, London.

DONATION.

JOHNSON PETTIT, Esq., of Grimsby, Ontario, in forwarding his annual subscription to the Entomological Society of Canada, has kindly added a donation to the publication fund of \$2; he has also obtained the names of three persons for nomination as members. We beg to offer him our hearty thanks, and commend his good example to the Members of the Society.

All communications, remittances and exchanges, should be addressed to "THE REV. C. J. S. BETHUNE, *Credit, Ont., Canada.*"

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